Pulmonary Trichomoniasis Associated With a Fever of Unknown Origin

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ACCORDING TO TODD,[4] trichomonas is found in man mainly in the colon but also in the vagina and, rarely, in the sputum of patients with pulmonary gangrene and putrid bronchitis. Unlike other flagellates, trichomonas does not become encysted, and Todd expressed belief that the organism gets into the mouth through ingestion of contaminated food. Other investigators[3] say that the dental and gingival contamination with trichomonas in man occurs directly by mouth to mouth contact. In the present case, pulmonary trichomoniasis in a man apparently was brought about by mouth to vagina contact.

REPORT OF A CASE

The patient, a 47-year-old business executive, sought medical advice because of chronic bronchitis, "hay fever" and fever of unknown origin. He did not appear acutely ill, but while giving his history was frequently interrupted by a hacking cough productive of copious sputum. In the course of a promiscuous sex life he had had gonorrhea and no other venereal diseases. Twice he had had pneumonitis, the second time (25 years ago) so severely that he was in hospital for 28 days and comatose for most of that time. When discharged he had pulmonary tuberculosis with positive sputum. Later x-ray examination showed the disease inactive.

In 1943, following a bad cold, he had rhinorrhea, nasal blockage, conjunctival and nasal pruritus, sneezing and a bronchial cough which was continuously troublesome from then on. A controlled diet and hyposensitization for pollens to which he was strongly reactive ameliorated the symptoms of hay fever but did not reduce the severity of bronchitis. In 1945 for the first time he had fever for which, in spite of extensive diagnostic procedures, no cause could be found. Spells of fever occurred at least once each year thereafter, at first lasting only two days, but finally seven days and more. Oral temperature was as high as 104° F even with the use of acetylsalicylic acid. Before each episode there was a premonitory period characterized by waves of warmth and diaphoresis, about ten a day, that left the patient very weak. Then would follow a period of fever with coughing that did not raise sputum. Within a week after fever abated, coughing raised thick yellow and green phlegm, this phase lasting six to eight weeks before the patient felt well again. Repeated laboratory and x-ray examinations over the years did not result in a diagnosis beyond "fever of unknown origin."

Submitted August 2, 1963.

When questioned about his sex life the patient told of mouth-genitalia contact with various women before copulation.

On physical examination the nasal turbinates were hypertrophic and edematous, obstructing the air passage especially on the right. The right ear drum was protruding and pink. The throat was edematous. Anterior cervical nodes were palpable. There was a palpable nodule 0.5 cm in diameter over the lower pole of the left lobe of the thyroid gland. The chest was symmetrical and expiratory excursions good. Mild moist rales were heard, especially in the left lower lobe on deep inspiration, and moist coarse rhonchi over the bronchial tree, clearing after cough. There was no dullness to percussion.

Results of urinalysis were within normal limits and there were no abnormal microscopic findings in the sediment. Protein-bound iodine was 7.3 micrograms for 100 ml of serum. Uptake of I^{131} by the thyroid gland at 24 hours was 15 per cent. A scintigram showed a normal sized gland with activity uniform except for an area of lessened density in the lower pole of the left lobe. Results of serologic tests for syphilis were negative. Hemoglobin content of the blood was 14.8 gm per 100 ml. Leukocytes numbered 8,000 per cu mm with 64 per cent polymorphonuclear cells, 22 per cent lymphocytes, 8 per cent monocytes, 5 per cent eosinophils and 1 per cent basophils. The sedimentation rate (Wintrobe) was 26 mm in one hour (corrected for V.P.C.). A culture of the sputum, which had an abhorrent odor, produced a growth of gamma streptococci, proteus, staphylococcus albus and a non-pigmenting pseudomonas, showing a sensitivity to a number of antibiotics. On cytologic examination of the sputum by the Papanicolaou method, there were no tumor cells, fungi or large lung tissue fragments demonstrated. Examination of a fresh wet specimen of sputum showed numerous pus cells, epithelial cells, red blood cells, flagellates of trichomonas, an object resembling an ovum of paragonimus westermani, numerous Gram-positive cocci and Gram-negative bacilli. On subsequent examinations of a wet specimen of sputum that had been collected after the patient had carefully washed his mouth with hydrogen peroxide, trichomonas parasites were seen. Allergic sensitivity tests elicited very intense reactions to seasonal and to perennial inhalants.

Treatment included chloramphenicol, 250 mg four times a day for four days, followed by chlortetracycline in dosage of 250 mg four times a day for four days after consideration was given to the mixed flora grown in the sputum culture and the results of the sensitivity tests. Specific allergic hyposensitization also was begun. Complete abstinence

from the mode used in his sexual relationship was strongly urged upon the patient. Improvement was noted within several weeks and at last report 13 months had passed without either cough or fever. Once during that time penicillin and sulfadimethoxine had been administered for a perforated left ear drum, which healed rapidly.

COMMENT

The chronic bronchitis of this patient over a period of 17 years with a fever of intermittent character is believed to have been caused by a mixed bacterial and trichomonas infection. The evidence on which such belief is based is circumstantial: Trichomonas was found in the sputum during the illness; after the recovery it was absent. Moreover, the culture of the sputum grew Gram-positive cocci and Gram-negative bacilli that showed antibiotic sensitivity to many drugs, but the illness was not abated by these drugs. The fact that when the patient refrained from mouth to vagina contact the previously recurrent, patterned attacks of illness completely disappeared and no trichomonas was found in the sputum, suggests that the "attacks" were caused by reinfection rather than relapse.

That trichomonas was identified only in a fresh wet specimen indicates the importance of direct examination of fresh sputum.

The difference in organ response to the parasite is obvious: Whereas chronic vaginitis induced by trichomonas is very resistant to therapy, the parasite disappeared from the bronchial secretions of the patient in the present case without any trichomonacidal therapy.

Since the Kinsey report[1,2] indicated that mouth-to-genital contact is not uncomon in heterosexual relations, physicians may do well to be alert for complications such as occurred in the case here reported.

SUMMARY

Chronic bronchitis of a 47-year-old man was refractory to all methods of treatment over a period of many years. Extensive laboratory tests failed to disclose the pathogen until, in a fresh wet specimen of sputum, trichomonas was identified. The contamination of the bronchial tree with this pathogen occurred by mouth to vagina contact. A short treatment with antibiotics was given because of other organisms present and the patient's chronic bronchitis and perplexing episodes of fever abated when he abstained from mouth to genitalia proximation.

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